

Goldschlag 112305CON

IN THE CLAIMS:

1. - 12. *cancelled*

13. *(previously presented)* An apparatus for initializing a series of electronic voting transactions, comprising:

- a. a processor; and
- b. a memory storing instructions adapted to be executed by said processor to,
  - i. receive a voter registration request message that atomically binds vote authorization data and a blinded unvalidated vote certificate to be validated;
  - ii. determine if the vote authorization data is valid;
  - iii. if the vote authorization data is valid, then to validate the blinded unvalidated vote certificate to obtain a blinded vote certificate; and
  - iv. send a voter registration response message to a voter that includes the blinded validated vote certificate atomically bound to the voter registration request message,said memory coupled to said processor.

14. *(previously presented)* The apparatus of claim 13, wherein the certificate indicates a yes or no vote.

15. *(previously presented)* An apparatus for performing an electronic voting transaction, comprising:

- a. a processor; and
- b. a memory storing instructions adapted to be executed by a processor to
  - i. receive a voting transaction request message that atomically binds an unblinded vote certificate and a blinded unvalidated vote certificate to be validated;
  - ii. determine if the unblinded vote certificate is valid; and

Goldschlag 112305CON

iii. if the unblinded vote certificate is valid, then to perform a vote transaction response that validates the blinded unvalidated vote certificate to obtain a validated blinded vote certificate, and sends the validated blinded vote certificate atomically bound to the voting transaction request message to a voter in a voting transaction response message,  
said memory coupled to said processor.

16. *(previously presented)* The apparatus of claim 15, wherein the parity of the certificate indicates a yes or no vote.

17. *(previously presented)* an apparatus for auditing an electronic voting transaction, comprising:

- a. a processor; and
- b. a memory storing instructions adapted to be executed by said processor to
  - i. receive a transaction request message that atomically binds an unblinded vote certificate and a blinded unvalidated vote certificate to be validated and blinded vote audit data;
  - ii. send a vote audit request message atomically bound to the voting transaction request message to a voter;
  - iii. receive a vote audit response message atomically bound to the vote audit transaction message, where the vote audit response message includes vote audit response data; and
  - iv. determine if the blinded vote audit data is valid using the vote audit response data,said memory coupled to said processor.

18. *(previously presented)* The apparatus of claim 17, wherein the certificate indicates a yes or no vote.

Goldschlag 112305CON

19. *(previously presented)* An apparatus for recovering from an interruption in an electronic voting transaction, comprising:

- a. a processor; and
  - b. a memory storing instructions adapted to be executed by said processor to
    - i. receive a first voting transaction request message that includes a session key, a nonce and a blinding factor applied to the nonce, and that atomically binds an unblinded vote certificate and a blinded unvalidated vote certificate to be validated;
    - ii. store the first voting transaction request message in a recovery database;
    - iii. determine if the unblinded vote certificate is valid;
    - iv. if the unblinded vote certificate is valid, then performing a voting transaction response that validates the blinded unvalidated vote certificate to obtain a validated blinded vote certificate, sends the validated blinded vote certificate atomically bound to the voting transaction response recipient in a first voting transaction response message, and stores the first voting transaction response message in a recovery database;
    - v. receive a second voting transaction request message that includes a session key, a nonce and a blinding factor applied to the nonce, and that atomically binds an unblinded vote certificate and a blinded unvalidated vote certificate to be validated;
    - vi. determine if the second voting transaction request message has the same nonce, session key, and blinding factor applied to the nonce as the first voting transaction request message stored in the recovery database;
    - vii. if the second voting transaction request message has the same nonce, session key, and blinding factor applied to the nonce as the first voting transaction request message, then to retrieve the first voting transaction response message from the recovery database and send the first voting transaction response message to the voting transaction response recipient,
- said memory coupled to said processor.

Goldschlag 112305CON

20. *(previously presented)* The apparatus of claim 19, wherein the parity of the certificate indicates a yes or a no vote.

21. *(previously presented)* A medium storing instructions adapted to be executed by a processor to perform the steps of:

- a. receiving a voter registration request message that atomically binds
  - i. vote authorization data, and
  - ii. a blinded unvalidated vote certificate to be validated;
- b. determining if the vote authorization data is valid;
- c. if the vote authorization data is valid, then validating the blinded unvalidated vote certificate to obtain a blinded validated vote certificate; and
- d. sending a voter registration response message to a voter that includes the blinded validated vote certificate atomically bound to the voter registration request message.

22. *(previously presented)* A medium storing instructions adapted to be executed by a processor to perform the steps of:

- a. receiving a voting transaction request message that atomically binds
  - i. an unblinded vote certificate, and
  - ii. a blinded unvalidated vote certificate to be validated;
- b. determining if the unblinded vote certificate is valid; and
- c. if the unblinded vote certificate is valid, then performing a voting transaction response that includes
  - i. validating the blinded unvalidated vote certificate to obtain a validated blinded vote certificate; and
  - ii. sending the validated blinded vote certificate atomically bound to the voting transaction request message to a voting transaction response recipient in a voting transaction response message.

Goldschlag 112305CON

23. *(previously presented)* A medium storing instructions adapted to be executed by a processor to perform the steps of:

- a. receiving a voting transaction request message that atomically binds
  - i. an unblinded vote certificate,
  - ii. a blinded unvalidated vote certificate to be validated, and
  - iii. blinded vote audit data;
- b. sending a vote audit request message atomically bound to the voting transaction request message to a voter;
- c. receiving a vote audit response message atomically bound to the vote audit transaction message, wherein the vote audit response message includes vote audit response data;
- d. determining if the blinded vote audit data is valid using the vote audit response data.

24. *(previously presented)* A system for performing an electronic voting transaction; comprising:

- a. means for receiving a voting transaction request message that atomically binds
  - i. an unblinded vote certificate, and
  - ii. a blinded unvalidated vote certificate to be validated;
- b. means for determining if the unblinded vote certificate is valid; and
- c. means for validating the blinded unvalidated vote certificate to obtain a validated blinded vote certificate; and
- d. means for sending the validated blinded vote certificate atomically bound to the voting transaction request message to a voter in a voting transaction response message.

25. *(previously presented)* The system of claim 24, further comprising means for auditing an electronic voting transaction.

Goldschlag 112305CON

26. *(previously presented)* The system of claim 24, further comprising means for initializing a series of electronic voting transactions.

27. *(previously presented)* The system of claim 24, further comprising means for recovering from an interruption in an electronic voting transaction.